



CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005



Job No.: CTCE/BBMP/KJ/W.No.14/GSB-I/GR/2017-18

Date 12.04.2017

TEST REPORT ON GRADATION FOR COARSE GRADED GARNULAR SUB BASE

* Customer	: Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: Mr. K. Jagadish, #3424, 6th Cross, Gayathrinagar, Bangalore – 560 021.
* Name of work	: Improvements to Roads and Drains at Defence Colony in Bagalagunte Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
* Reference	: BBMP/DZ/AEE/TDSD/PR/06/2017-18 Dated: 10.04.2017
* Sample ID	: Coarse Graded-I
Technical Reference	: IS : 2720 (Part - 4) 1985 (RA-2010), MORTH Table : 400-2
Date of Testing	: 12.04.2017



Oven Dry Wt (gm) : 5000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specified Limits
75	0	0	0	100	100
26.5	1355	1355	27.10	72.90	55-75
4.75	2590	3945	78.90	21.10	10-30
0.075	950	4895	97.90	2.10	<10
PAN	105				
Total	5000				



* Information is furnished by the Customer/Representative

Remarks: Satisfies MORTH Specifications as per Table 400-2, Grading I

Note:

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⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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[Signature]
[Stamp]

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Job No.: CTCE/BBMP/KJ/W.No.14/WMM/Gradation/2017-18

18.04.2017

TEST REPORT ON GRADATION OF WET MIX MACADAM

* Customer	: Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: Mr. K. Jagadish, #3424, 6th Cross, Gayathrinagar, Bangalore – 560 021.
* Name of Work	: Improvements to Roads and Drains at Defence Colony in Bagalagunte Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
* Reference	: BBMP/DZ/AEE/TDSD/PR/06/2017-18 Dated: 10.04.2017
Sample ID	: Wet Mix Macadam
Technical Reference	: IS 2386 (part-1)1963 (RA-2016)
Date of Testing	: 18.04.2017



Oven Dry Wt (gm): 5000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits As per Morth Table 400-11
53	0	0	0	100	100
45	165	165	3.3	96.7	95-100
22.4	1520	1685	33.70	66.30	60-80
11.2	1005	2690	53.80	46.20	40-60
4.75	580	3270	65.40	34.60	25-40
2.36	510	3780	75.60	24.40	15-30
0.600	515	4295	85.90	14.10	8-22
0.075	585	4880	97.60	2.40	0-8

*Information is furnished by the Customer/Representative.

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Job No: CTCE/BBMP/KJ/W.No.14/BM/AIV/2017-18

06.05.2017

TEST REPORT ON IMPACT VALUE OF AGGREGATES

* Customer	: Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: Mr. K. Jagadish, #3424, 6th Cross, Gayathrinagar, Bangalore – 560 021.
* Name of Work	: Improvements to Roads and Drains at Defence Colony in Bagalagunte Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
* Reference	: BBMP/DZ/AEE/TDSD/PR/06/2017-18 Dated: 10.04.2017
* Sample ID	: Hot Mix Plant, Bangalore
Technical Reference	: IS : 2386(Part -4)-1963 (RA-2011)
* Type of Mix	: Bituminous Macadam
Date of Testing	: 06.05.2017



Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	378	380	20.32
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	76	78	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	302	302	
4	Aggregate Impact value = percent fines $100 * (W_2/W_1)\%$	20.11	20.53	

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Macadam is 30%

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ಬಿ.ದಾಸರಾಹಳ್ಳಿ ಸಬ-ದಿವಿಷನ್
ಮಾನ್ಯ ಅಧೀಕ್ಷಕರು
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18.04.2017

TEST REPORT ON FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

* Customer	: Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: Mr. K. Jagadish, #3424, 6th Cross, Gayathrinagar, Bangalore – 560 021.
* Name of Work	: Improvements to Roads and Drains at Defence Colony in Bagalagunte Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
* Reference	: BBMP/DZ/AEE/TDSD/PR/06/2017-18 Dated: 10.04.2017
* Sample ID	: Wet Mix Macadam
Technical Reference	: IS 2386(Part 1) 1963 (RA 2016)
Date of Testing	: 18.04.2017



Sl.No.	Description	Result
1	Flakiness Index	11.65%
2	Elongation Index	13.90%
3	Combined Flakiness & Elongation Index	25.55%

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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 ಪ.ದಾಸರಾಹಳ್ಳಿ ಸಬ-ವಿಭಾಗ
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Job No.: CTCE/BBMP/KJ/W.No.14/CSR-05/327a/QB(BC)/2017-18

06.05.2017

TEST REPORT ON DETERMINATION OF BITUMEN CHARACTERISTICS

* Customer	:	Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	Mr. K. Jagadish, #3424, 6th Cross, Gayathrinagar, Bangalore – 560 021.
* Name of work	:	Improvements to Roads and Drains at Defence Colony in Bagalagunte Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/06/2017-18 Dated: 10.04.2017
* Sample ID	:	Bitumen
Source/ Location	:	Hot Mix Plant, Bangalore.
Sample Received on	:	04.05.2017
Period of Testing	:	06.05.2017



The results of the tests conducted on the bitumen sample are as follows:

Sl. No	Description	Test Method as per IS	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 °C, 1/10 mm	IS :1203 -1978 (RA-2014)	84	80 to 100
2	Softening point, °C	IS :1205 -1978 (RA-2014)	44	Min. 40
3	Ductility at 27°C, cm	IS :1208 -1978 (RA-2014)	100 >	Min. 75
4	Flash Point, °C	IS :1209 -1978 (RA-2014)	308	Min. 220

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